UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,976	06/30/2000	Douglas P. Brown	NCRC-0012-US(9020)	1448

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NGUYEN, CINDY

ART UNIT	PAPER NUMBER
2171	

DATE MAILED: 07/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)	
Office Action Summary	09/608,976		BROWN ET AL.	
	Examiner		Art Unit	
	Cindy Nguyen		2171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *30 June 2000* .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-30* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *30 June 2000* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4-5* .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

This is in response to application filed on Jun 30, 2000 in which claims 1-30 are presented for examination.

Information Disclosure Statement

The information disclosure statement filed on Feb 18, 2001 and March 12, 2001 are in compliance with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. Because They had been placed in the application file, and the information referred to therein has been considered as to the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1- 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carino, Jr. (U.S.6067542) in view of Jones et al. (U.S.6415307).

In consideration of claim 1, Carino, Jr.: "A method of presenting an execution plan for a query," (see col. 3, lines 45-49, Carino Jr.) comprising: "determining steps of the query execution plan in a

parallel database system" (see col. 8, lines 40-52, Carino Jr.) However, Carino, Jr. did not specifically

detail the step of depicting and display in the parallel execution steps. On the other hand, Jones et al.

disclose: "display the steps of the query execution plan in a graphical user interface" (see col. 13, lines

52-57, Jones et al.), Jones et al. disclose: "depicting parallel execution of steps of the query execution

plain in the graphic user interface" (see col. 13, lines 41-51, Jones et al.).

Therefore, At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to substitute an image of the pages of a publication and text data with the steps of

execution plan in a system, methodology, and an article to performing steps for simultaneous display in

a graphical user interface as taught by Jones et al. Accordingly, it would have been obvious to

incorporate the teachings of execution plans in parallel database system (MPP) as taught by Carino, Jr.

The motivation being to have enabled a user to provide information for optimizing a query in a

massively parallel system and to pop up multiple display screens illustrating multiple execution query

plans so that the user may select the most desirable.

As per claim 2, the limitations of this claim have been noted in the rejection of claim 1.

Applicant's attention is directed to the rejection of claim 1 above. In addition, Carino, Jr. discloses "

wherein determining the steps comprises determining steps of the query execution plan in the parallel

database system running in a multiprocessing platform having plural nodes" (see col. 9, lines 6-14,

Carino, Jr.).

Regarding claim 3, the limitations of this claim have been noted in the rejection of claim 1.

Applicant's attention is directed to the rejection of claim 1 above. In addition, Carino, Jr. discloses:

"Wherein determining the steps comprises determining steps of the query execution plan in the parallel

database system running in a platform having plural virtual processors to handle access to data in the

parallel database system" (see col. 9, lines 15-25, Carino Jr.).

As per claim 4, the limitations of this claim have been noted in the rejection of claim 1.

Applicant's attention is directed to the rejection of claim 1 above. In addition, Jones et al. disclose: "

displaying the steps as icons" (see col. 6, lines 13-14, Jones et al.).

As per claim 5, the limitations of this claim have been noted in the rejection of claim 1.

Applicant's attention is directed to the rejection of claim 1 above. In addition, Carino, Jr. discloses:

wherein the database management system is executable in a platform" (see 106, Fig. 1, and

corresponding text, Carino, Jr.). However, Carino, Jr. didn't disclose specifically detail in this claim. On

the other hand, Jones et al. disclose: "wherein displaying the icons comprises display one or more of the

icons selected from the group consisting of an icon representing a table" (see col. 11, lines 65 to col. 12,

lines 5, Jones et al.) " an icon representing an operation performed on a component of the platform" (see

col. 11, lines 15-22, Jones et al), "an icon representing a query statement" (see col. 11, lines 58-64,

Jones et al.), " icon representing an operation performed on two or more tables" (see col. 11, lines 37-43,

Jones et al.).

As per claim 6, the limitations of this claim have been noted in the rejection of claim 1.

Applicant's attention is directed to the rejection of claim 1 above. In addition, Carino, Jr. discloses "the

steps of the query execution plain is performed by an optimizer" (see col. 2, lines 18-20, Carino, Jr.).

As per claim 7, the limitations of this claim have been noted in the rejection of claim 6. Applicant's attention is directed to the rejection of claim 6 above. In addition, Carino, Jr. discloses "the steps of the query execution plain is performed by an optimizer based on emulated environment data of a target system" (see 502, Fig. 5, and corresponding text, Carino, Jr..), "emulated environment data present in a test system" (see col. 14, lines 58-65, Carino, Jr.).

As per claim 8, the limitations of this claim have been noted in the rejection of claim 1. Applicant's attention is directed to the rejection of claim 1 above. In addition, Carino, Jr. discloses "the steps of the query execution plain is performed in a test system based on emulated environment data of a target system that is separate from the test system" (see 506, Fig. 5 and corresponding text, Carino, Jr.).

As per claim 9, the limitations of this claim have been noted in the rejection of claim 1. Applicant's attention is directed to the rejection of claim 1 above. In addition, Jones et al. disclose "displaying explain text of the query execution plan" (see col. 2, lines 43-55, Jones et al.).

Regarding claim 10, the limitations of this claim have been noted in the rejection of claim 9. Applicant's attention is directed to the rejection of claim 9 above. In addition, Jones et al. disclose: wherein the explain text comprises displaying the explain text in a first screen and wherein displaying the steps of the query execution plan comprises displaying the steps in a second screen (see col. 3, lines 58-61, Jones et al.).

Regarding claim 11, Carino, Jr. discloses: determining a first execution plan of the query under a

first condition and second execution plan of the query under a second condition (see col. 17, line 46-48,

Carino Jr.). However, Carino, Jr. didn't disclose specifically detail in this claim. On the other hand,

Jones et al. disclose: displaying the first and second execution plans concurrently to enable comparison

of the execution plans (see col. 3, lines 5-23, Jones et al.).

Regarding claim 12, Jones et al. disclose: wherein displaying the first and second execution plans

comprises displaying the execution plans in a graphical user interface (see col. 3, lines 5-23, Jones et

al.).

Regarding claim 13, the limitations of this claim have been noted in the rejection of claim 11.

Applicant's attention is directed to the rejection of claim 11 above. Jones et al. disclose: wherein

displaying the first and second execution plans comprises displaying the execution plans in a graphical

user interface having a first screen to display the first execution plan and a second screen to display the

second execution plan (see fig. 2, and corresponding text, Jones et al.).

As per claim 14, the limitations of this claim have been noted in the rejection of claim 11.

Applicant's attention is directed to the rejection of claim 11 above. In addition, Jones et al. disclose

"displaying the first and second execution plans comprises displaying a collection of icons to represent

steps of each of the execution plans" (see col. 11, lines 51-54, Jones et al.).

As per claim 15, the limitations of this claim have been noted in the rejection of claim 11.

Applicant's attention is directed to the rejection of claim 11 above. In addition, Carino Jr. discloses :a

third execution plan of the query under a third condition (see col. 5, lines 17-20, Carino Jr.) and

Jones et al. disclose: displaying the first, second and third execution plans concurrently to enable comparison of the execution plans" (see Fig. 2 and corresponding text, Jones et al.).

Regarding claims 16-17, Carino. Jr. discloses: query in cooperation with the first version of a software module and the second execution plan comprises determining an execution plan for the query in cooperation with a second version of the software module of the parallel database system (see Fig. 4 and corresponding text, Carino, Jr.).

Regarding claims 18-19, Carino, Jr. discloses: wherein determining the first execution plan comprises determining an execution plan for the query in the system having a first arrangement and the second execution plan comprises determining an execution plan for the query in a system having a second arrangement (see col. 16, lines 26-52, Carino, Jr.).

Regarding claim 20, Carino Jr. discloses: " wherein determining the first execution plan comprises determining execution plan involving a table having a first content" (see col. 14, lines 58-65, Carino Jr.).

Regarding claim 21-22, Carino Jr. discloses: " wherein determining the second execution plan comprises determining execution plan involving a table having a second content contains statistics" (see col. 8, lines 23-38, Carino Jr.).

Regarding claim 23, the limitations of this claim have been noted in the rejection of claim 1.

However, Carino, Jr. did not specifically detail. On the other hand, Jones et al. disclose: the controller

displaying a representation of the execution plan in the graphical user interface (see col. 13, lines 52-57,

Jones et al.).

Regarding claim 24, the limitations of this claim have been noted in the rejection of claim 23.

Applicant's attention is directed to the rejection of claim 23 above. In addition, Carino Jr. discloses: "

wherein the emulation data comprises cost-related information including a number of nodes in the target

system and number of CPUs in each node" (see Fig. 4 and corresponding text, Carino Jr.).

Regarding claim 25, the limitations of this claim have been noted in the rejection of claim 23.

Applicant's attention is directed to the rejection of claim 23 above. In addition, Carino Jr. discloses: "

wherein the emulation data comprises cost-related information including a number of virtual processors

running in the target system" (see col. 12, lines 3-9, Carino Jr.).

Regarding claim 26, the limitations of this claim have been noted in the rejection of claim 23.

Applicant's attention is directed to the rejection of claim 23 above. In addition, Carino Jr. discloses: "

wherein the emulation data comprises cost-related information including a number of nodes in the target

system and number of CPUs in each node" (see col. 14, lines 61-65, Carino Jr.).

Regarding claim 27-28, the limitations of these claims have been noted in the rejection of claim

23. Applicant's attention is directed to the rejection of claim 23 above. In addition, Carino, Jr. discloses:

wherein the emulation data represents a target system having a multi-node parallel processing system (see col. 9, lines 7-14, Carino, Jr.) and having a single-node multiprocessing system (see col. 14, lines 14-18, Carino, Jr.).

Regarding claim 29, the limitations of this claim have been noted in the rejection of claim 23. Applicant's attention is directed to the rejection of claim 23 above. In addition, Carino, Jr. discloses: wherein the emulation data represents a target system running plural virtual processors for handling access to the parallel database system (see Fig. 4 and corresponding text, Carino, Jr.).

Regarding claim 30, all the limitations of this claim have been noted in the rejection of claim 1. It is therefore rejected as set forth above.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cindy Nguyen
July 16, 2002

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